



California
TECHNOLOGY AGENCY

California Information Technology Strategic Plan

2013 Update

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Focusing on Outcomes

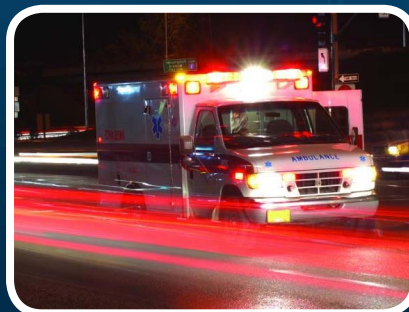


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SECRETARY OF CALIFORNIA TECHNOLOGY

I am pleased to present the 2013 update to California's Statewide Information Technology Strategic Plan. This plan maintains continuity with the 2012 plan while further specifying the strategic goals of the state. The plan originally adopted in January 2012, lays out a strategic vision and direction for the state technology community. It is not meant to be a tactical plan that lays out specific tasks and operational responsibilities. Rather, it provides strategic objectives which can serve as guideposts for the technology community and decision-makers in supporting state programs and business operations to better serve constituents.

In developing this plan, we sought input from program and policy leaders, leaders of the state's information technology community and from the private sector. Their input helped us identify some of the challenges and issues which must be addressed in order to advance the state's effective use of technology. These include fostering collaboration between decision-makers, program administrators and the technologists responsible for the systems that support those programs; maintaining a skilled technology workforce; leveraging value from the information residing in our technology systems, while safeguarding and securing sensitive data; and ensuring that the state's technology infrastructure is secure, reliable and efficient.



I would like to acknowledge the hard work of government information technology professionals and agency leaders who have made 2012 such a productive year. California continues to be recognized as a national leader for its innovative solutions that provide citizens with valuable information available anytime, from any device. Digital technology helps Californians connect with their state government in efficient, convenient and cost effective ways.

Each of us in the state technology community has a stake in ensuring that California leverages the advantage of technology to efficiently and effectively provide the public with services and information. We need to put forward our best ideas and work together to improve operations and address the issues facing state government. It is an important objective that is worthy of our best efforts. This plan seeks to provide clarity and guidance in setting priorities. I invite the California policy and technology communities and the vendor community to work together to maintain California's standing as a recognized leader in information technology. I look forward to working with you to make California's 21st century government more efficient, more effective and more accessible to constituents.

Sincerely,

CARLOS RAMOS
Secretary, California Technology Agency

Mission

The mission of the California Technology Agency and the state's information technology community is to support programs and departments in the delivery of state services and information to constituents and businesses through agile, cost-effective, innovative, reliable and secure technology.

Vision

California's information technology community aspires to be a trusted, recognized partner and technology provider that enables government to be accessible to citizens and deliver services and information with excellence and creativity.





Guiding Principles for California's Technology Community

The following principles form the common themes that will guide agency/department chief information officers and business executives in achieving the state's information technology strategic goals and objectives.

Be Accountable: **Own** business results and use technology to drive positive outcomes.

Engage on technology initiatives and take responsibility for actions and outcomes.

**Be Service
Driven:**

Be Sensible and pursue solutions with a clear business case, that make government more accessible and responsive to Californians and provide government employees with effective tools to do their jobs.

Ensure that proposed solutions provide a measurable impact and value to solve an identified problem.

Collaborate:

Involve stakeholders early to develop a common understanding of issues and ensure shared objectives.

Build cooperative relationships with stakeholders to develop proposed solutions and achieve outcomes that best serve the people of California.

Integrate knowledge sharing and services across departments.

**Understand
Enterprise
Value:**

Substantiate tangible return on investments in technology that meet or exceed the expectations of program and policy sponsors.

Define where technology fits in the different areas of government.

Demonstrate the value provided by information technology solutions to government and consumers at large.

Leverage shared services across government to increase value, eliminate unnecessary duplication and reduce costs.

**Demonstrate
Strong
Leadership:**

Understand the business and objectives of state leaders and constituents.

Manage effective governance, decision-making and communication.

Partner with program and policy leaders in leveraging innovative and cost-effective technology solutions to address the state's business problems.



Challenges and Opportunities

California government continues to face significant challenges in 2013 and beyond that will influence its direction, goals and priorities for business and information technology. It is essential to consider the economic, social and political challenges and opportunities facing California, as they will affect priorities in the uses of information technology to support the business of government.

Economic

- Continued economic pressures at the national and state level will continue to put pressure on California's budget even as the need for government services grows.

Social/Political

- To transact business and conveniently obtain information, the public wants services delivered online.
- Federal and state governments and constituents increasingly require greater accountability and transparency in government.
- Government is moving toward greater accountability in information technology investment, formalized risk management and documentation of results.
- A "digital divide" continues to exist along demographic and social/economic lines among the people of California.
- California's workforce is aging and retiring at a high rate. Departments lose critical knowledge as experienced staff leave the workforce. At the same time, agencies report that it is becoming more difficult to attract workers to state government jobs.

Technological

- Digital security remains a high priority to protect against cyber-attacks and ensure privacy for Californians.
- Sharing data across platforms can reduce redundant data collection and storage and increase the value of data to citizens and state employees and can turn data into information and actionable intelligence to guide program operations and policy.
- Cloud computing is an area of focus for its flexible, scalable services, its potential to reduce costs and increase the efficiency of services, as well as the security challenges it presents.
- Reducing duplicative efforts, reducing operating costs and increasing the efficiency of services remain focus areas.
- Users are increasingly connecting to the Internet using mobile devices, making it critical for California to recognize this rapidly growing population.
- Replacement of legacy systems is a significant challenge, but it also provides an opportunity to develop shared services within and across departments, reducing unnecessary duplication and improving data sharing.
- Promoting broadband and connectivity continues to be important in order to connect Californians in all areas of the state.
- Complex projects continue to present challenges for the state, including how to plan and manage the projects for successful completion.
- The state's information technology workforce will be challenged to keep their skill sets current given the pace of technological innovation.

Strategic Goals

Goal 1: Responsive, Accessible and Mobile Government

Government is providing more services and information to citizens by expanding online services, increasing access from mobile devices, creating innovative business systems and bridging the digital divide by increasing digital literacy and access to broadband connectivity. The result is a government that better meets Californians' service expectations and provides Californians with access at their convenience wherever they are.

Objective 1.1

Increase online service and information offerings and make them more accessible through mobile devices.

- Develop mobile applications that help citizens locate and utilize government services.
- Increase the use of government information by increasing user access.
- Develop and support mobile application tools, infrastructure, training and centralized hosting.

As of April 2012, over 88 percent of American adults have cell phones and more than half of them, 55 percent, use their phones to go online¹. This represents a notable increase from 31 percent of cell phone owners who used their phones to go online as of April 2009. Mobile access to the web is expected to surpass access via a personal computer by 2014. To support the growing demand for mobile access, the State of California currently offers 38 mobile applications for public consumption located within the California Mobile Gallery.

¹ Pew Research Center, "Pew Internet & American Life Project," 2012.





California is making progress in reducing the barriers to broadband access and increasing broadband adoption. Nearly three out of four California households now have broadband Internet connections, a substantially faster growth rate than the national average. In California, 73 percent of households have broadband connections, seven percentage points above the national average. In 2008, California matched the national average of 55 percent and has since outpaced national growth 33 percent to 20 percent. Since 2008, in-home broadband adoption in households earning less than \$40,000 a year has increased 81 percent. Broadband adoption among people with disabilities has grown 55 percent¹.

¹ Public Policy Institute of California, "PPIC Statewide Survey"

Objective 1.2

Address the digital divide and close the broadband opportunity gap by promoting broadband access and fostering digital literacy.

Objective 1.3

Enhance transparency, accessibility and openness through online and mobile solutions to promote informed participation by the public.

JobScout, a Web and mobile platform, uses a social and game environment to teach basic internet skills to improve digital literacy. The system engages users in self-paced online activities on how to use a web browser to find a job online, fill out an application, and build a resume with cover letter. JobScout allows the user to assume the role of a "scout", searching for digital literacy skills to find employment. Imagine learners on a discovery trail with the guidance of a master scout being able to navigate through many digital literacy skill activities, mastering each point and reaching the destination successfully to achieve their badge. JobScout leads users through self-paced activities that result in a completed and successfully uploaded resume and cover letter as well as the skills to use online databases to find a job and network online with peers. JobScout is a digital literacy project of the Link Americas Foundation and the Technology Resources and Internet Literacy (TRAIL) organization with support from the State of California. JobScout is available in all California Public Libraries or online at www.myjobscout.org.

Goal 2: Results Through Leadership and Collaboration

Effective organizations have effective governance. With the California Technology Agency in the lead role, the state has established an effective governance model that involves agency information officers and chief information officers in decision making. As technology progresses to meet the evolving needs of the public, information technology policies and authorities must also evolve to remain relevant and current. This model will rationalize the state's information technology policy and portfolio management, reduce bureaucracy and focus on tangible results. This governance model will address the issues the state faces in managing its technology portfolio.

Objective 2.1

Establish a governance structure to evaluate business needs, priorities and areas where technology can provide value and enhance services to citizens.

- Review and reengineer Information Technology Policy Letters and the information technology project lifecycle to eliminate unnecessary bureaucracy and ensure a focus on business outcomes.
- Engage agency information officers and chief information officers in decision making and provide the appropriate level of authority and accountability for results.
- Create a results-oriented project environment and ensure that departments have a solid foundation for project initiation, competent project staff and greater involvement of project sponsors.

Objective 2.2

Leverage public-private partnerships to deliver innovative information technology solutions that leverage performance-based and benefits-based procurement strategies.

Objective 2.3

Utilize Enterprise Architecture as a management and governance tool to strengthen decision making and ensure standardized and stable systems.

- Create an Enterprise Architecture framework to facilitate statewide shared services and reusable assets.

The California Public Employees' Retirement System initiated the Pension System Resumption Project to consolidate pension information exchange between government employers and benefits providers. However, challenges with size, scope, and a traditional implementation approach caused the project to stall. Department leadership elected to continue the effort but directed the adoption of an innovative, holistic approach which included embedding collaboration and communications in every phase, streamlining governance, using a metrics-driven methodology to measure performance, assess readiness, and rapidly recover problem areas. The Pension System Resumption Recovery Plan project brought together over 3,000 employers and 125 business providers to form a collaborative business partner community to work with vendor and state staff to build a solution to meet their needs. This modernization initiative now allows employers and benefits providers to immediately reconcile 1.6 million member accounts from origin to completion, resulting in faster, and more efficient service across the community. The Pension System Resumption Recovery Plan rescued a very large, high-risk project by developing a holistic, collaborative, agile, metrics-driven approach. Its methodologies can be scaled and applied to any project, especially those designed to manage business community partnerships.



Changing customer demands and the state's budget reality dictate that infrastructure transform to meet business needs efficiently and effectively to reduce information technology expenditures. Cloud computing is a model of computing in which scalable and flexible information technology enabled capabilities are delivered as a service using internet technologies. This expands flexibility by enabling capacity to be added or removed quickly, based on shifting demand, in a cost effective manner.

Goal 3: Efficient, Consolidated, and Reliable Infrastructure and Services

The state leverages a reliable technology infrastructure and shared services that are secure and economically and environmentally sustainable. This requires a strategic consolidation of information technology infrastructure, the development of computing as-a-service offerings, leveraging the advantages of cloud computing, creating robust shared services and establishing repeatable processes.

Objective 3.1

Streamline data center operations and infrastructure to eliminate costly and unnecessary duplication, increase efficiency, reduce costs and reduce energy consumption.

- Implement email, desktop, network, data center, server and storage consolidation and virtualization.

Objective 3.2

Leverage cloud computing technologies to achieve scalable, cost efficient and rapidly deployable computing capabilities.

- Adapt technology to business program needs through an appropriate blend of internal and external cloud platforms.





Objective 3.3

Enhance the state's public safety communications systems to ensure effective delivery of emergency services.

- Expand the joint use of state telecommunication systems and services where operationally, technically, and economically feasible.
- Upgrade and support newer technologies, features and services in public safety communications.

The Routing on Empirical Data (RED) Project was a collaborative effort among more than 500 state, local, and private stakeholders across California. The project dramatically improved the routing of wireless calls to the 9-1-1 system with an innovative solution that uses the location of wireless 9-1-1 callers and the location of the corresponding cell tower to determine the jurisdiction that should accept the call. This required the creation of a web-based system that converted huge amounts of data into formats usable for multiple stakeholders to optimize the routing of wireless 9-1-1 calls. RED's results showed that collaboration among 440 local 911 Public Safety Answering Point Managers, 58 County Coordinators, the California Highway Patrol, the California Technology Agency's 9-1-1 Division, the California State 9-1-1 Advisory Board and private sector can pay off. In 2007, 42.4 percent of wireless calls to 9-1-1 received busy signals. However, because of RED, in 2011, fewer than two percent receive busy signals while avoiding \$21.4 million in costs, a nearly 300 percent annual return on investment. In 2010, RED allowed California to distribute 2.6 million more calls across the state. As a result of RED's collaboration, Californians can reach lifesaving 9-1-1 services.



Goal 4: Information is an Asset

To engender trust from consumers of government services and information, the state must secure and safeguard sensitive and confidential data through strong privacy and data security practices and ensure that departments are prepared to operate during and recover from times of disruption (natural disasters, unplanned outages and other events). Additionally, government will leverage data resources and analytical capacities so we can convert data into information and knowledge that departments can use to make more informed policy decisions, administer programs, reduce costs, improve outcomes and better serve constituents. Further, by creating secure transactions, we will ensure that Californians can leverage technology with confidence to get the services and information they need.

Objective 4.1

Protect sensitive and confidential data through implementation of robust security and privacy programs.

- Implement and monitor compliance of security and privacy policies, standards and practices.
- Educate, train and raise awareness of information security risks.
- Implement next generation security tools.

Objective 4.2

Ensure the state's technology and public safety communication infrastructures have robust and reliable disaster recovery capabilities to support the continuity of government services.

Objective 4.3

Enhance the value of state information through tools to increase the ease of collaboration and data analysis.

- Improve how California uses public data and information by encouraging and enabling shared capabilities and solutions.
- Increase the availability of relevant, accurate and useful data to the public and government entities.

Many government services require an understanding of how decisions made with geographic information systems can impact different regions of our state. Access to location-based information has become critical in supporting informed and relevant decision making. The California Technology Agency's Geographic Information Systems Division has introduced the California Geoportal to harness the vast amounts of location-based data collected across state government and use such data as an asset. This tool brings together California's large geographic data portfolio into an easy to use portal that provides users the ability to search, discover and utilize location-based data through an intuitive Web based user interface. The California Geoportal will provide government, citizens, and businesses a comprehensive understanding of our diverse state through geographical information.

Goal 5: Capable Information Technology Workforce

The State of California relies on an information technology workforce that has the skills, ability, and drive to envision and implement technology solutions that improve how the state delivers information and services. By focusing on the strategic objective of maintaining a workforce that is skilled, capable, and agile, we will help to ensure we can fulfill the promise of delivering effective government services using technology.

Objective 5.1

Ensure the state's information technology workforce has the knowledge and skills to support the state's technology infrastructure and implement California's technology vision.

- Attract a skilled workforce by forecasting, analyzing and evaluating current and future technology job needs, and identifying and implementing outreach and workforce transition strategies.
- Maintain a skilled workforce by developing the capabilities of employees to fill key, critical positions requiring specialized knowledge and leadership positions.
- Develop core competencies of employees in information technology function areas such as Project Management, Business Analysis, Risk Management, Contract Management and Procurement.
- Establish communities of practice to develop and share best practices.
- Ensure the expertise exists for the successful completion of all phases of the project lifecycle, from concept to completion.

California's workforce is aging and a high number of employees are retiring from state government, causing a drain in talent, knowledge, and leadership from all levels of organizations. California government needs a workforce with the necessary skill sets to support modern and emerging technologies. The workforce requires adequate training, tools, and opportunities to refresh skills, develop new competencies and prepare for leadership roles.



Objective 5.2

Recognize state information technology accomplishments and require responsibility for service among all employees to create a sense of pride and accountability for the state's workforce.

- Partner with the California Human Resources Department and the information technology community to develop recognition programs for information technology accomplishments.

The Information Technology Leadership Academy was created to develop and enhance leadership skills of the information technology workforce in state government. Members learn to be change agents that can lead technological advancement, think strategically, deliver value and build relationships across organizational boundaries. Although the academy has been in place for twenty years, the curriculum has evolved to focus on leadership skills rather than management. One of the most important components of the academy is the "Walk like a Leader" program. Each student is partnered with a current state leader to spend a day "walking in their shoes". Students not only benefit from the opportunity to see how a day in the life of a leader is spent, but also from one-on-one mentoring, gaining insight on the leader's greatest career challenges and accomplishments. Another component of the program is to bring in speakers from both the private and public sectors to share their experience as executive leaders, and provide diverse insight into various leadership styles. Due to its success, the academy is being considered as a model for leadership training for various occupational groups at all levels of state government.



